

Remarks/Arguments

Claims 1 and 70 have been amended. Claims 1-70 are in the application. Entry of this amendment, and reexamination and reconsideration of the present application are respectfully requested in light of the above amendments and the following remarks.

Claims 1 and 70 have been amended by specifying that the process feed stream and the staged addition feed stream are mixed with each other in the process microchannel. Support for this amendment can be found in the Applicants' specification at page 6, line 25 to page 7, line 21.

Claims 1-70 have been rejected under 35 U.S.C. §103(a) as unpatentable over TeGrotenhuis et al. (U.S. Patent Application Publication US 2003/0180216 A1) in view of Nystrom et al. (U.S. Patent No. 6,299,852 B1). This rejection is respectfully traversed for the following reasons.

TeGrotenhuis et al. discloses microchannel devices wherein a reaction microchamber is in thermal contact with a heat exchange channel. The Examiner states that TeGrotenhuis et al. does not disclose the production of hydrogen peroxide by reacting hydrogen with oxygen in the disclosed microchannel devices.

To make up for this deficiency, the Examiner cites Nystrom et al. which discloses a process for producing hydrogen peroxide by the direct reaction between hydrogen and oxygen. Nystrom et al. discloses that "a gaseous reaction mixture containing hydrogen and oxygen is supplied to the reactor through an inlet and hydrogen peroxide enriched gas is withdrawn from the reactor through an outlet" (column 2, lines 17-21).

Neither of the foregoing references disclose mixing reactants with each other in a process microchannel as specified in the Applicants' amended claims 1 and 70. Mixing in the process microchannel provides the advantage of safe handling of the reactants. This is due to the fact that the dimensions of the process microchannel allow for enhanced quenching of unwanted free radical combustion reactions as well as small amounts of gaseous volume relative to the surrounding surface area of the process microchannel such that the potential energy of a detonation is safely contained within the process microchannel. This is not suggested in TeGrotenhuis et al. or Nystrom et al.

Applicants respectfully submit that the claims, as amended herein, are not obvious over the teachings in TeGrotenhuis et al. in combination with the teaching in Nystrom et al., but in fact define a patentable invention. Withdrawal of the rejection is believed to be warranted and is respectfully requested.

Applicants believe that the application is in condition for allowance. A Notice of Allowance is respectfully requested. In the event there are issue which the Examiner would like to discuss with the undersigned attorney, the Examiner is invited to contact the undersigned by telephone. Any fees required for the filing of this paper can be charged to Deposit Account No. 18-0988.

Respectfully submitted,

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